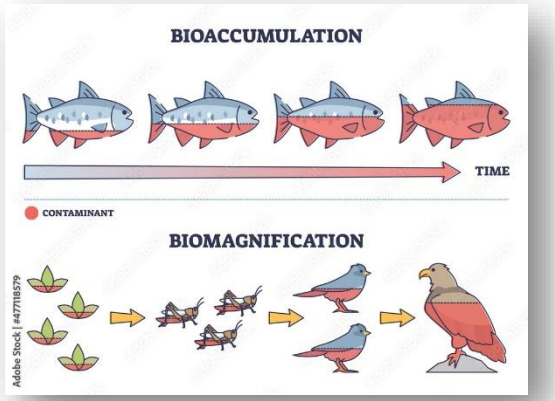
Making Data Work: Applying GMP and POPs Inventories for Evidence-Based Policy in NIPs, 30 January 2026

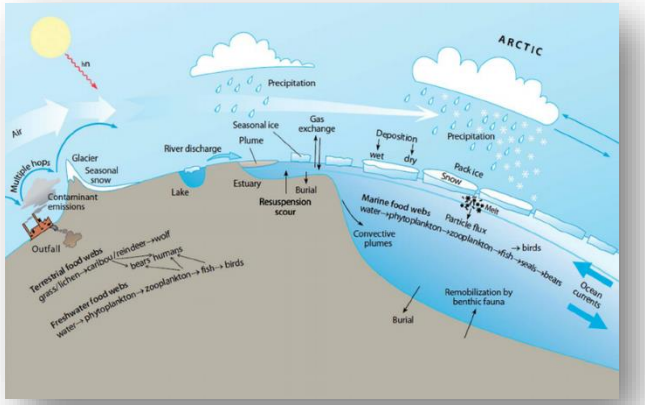
BASEL / ROTTERDAM / STOCKHOLM
CONVENTIONS

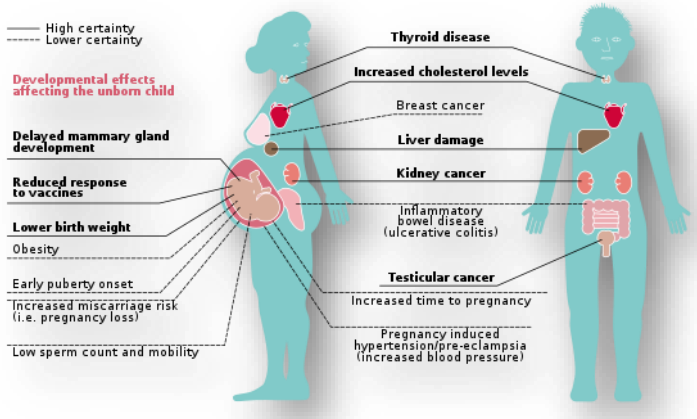
Ongoing GMP efforts of the Stockholm Convention Secretariat

Kei Ohno Woodall, Secretariat of the Basel, Rotterdam and Stockholm Conventions

Stockholm Convention on Persistent Organic Pollutants







A group of organic compounds that possess characteristics of:

- Persistence
- Bio-accumulation
- Adverse effects
- Potential for long-range environmental transport

POPs listed in Annex A, B, C or under review

Elimination

16 Pesticides:

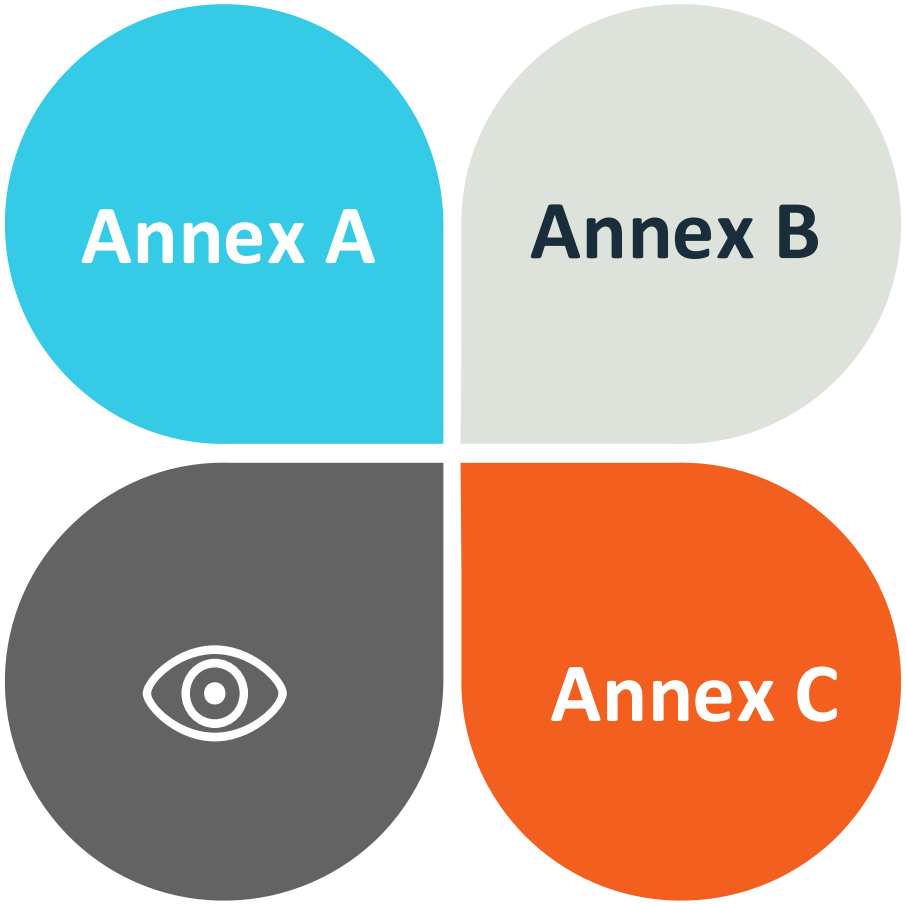
Aldrin; Chlordane; Chlordecone; Dicofol; Dieldrin; Endosulfan; Endrin; Heptachlor; AlphaHCH; BetaHCH; Lindane (gamma HCH); Mirex; PCP; Toxaphene; Methoxychlor; Chlorpyrifos

17 Industrial POPs:

DecaBDE; Hexa- and heptaBDE; Tetra- and pentaBDE; HBB; HBCD; HCB; HCBD; PCBs; PCNs; PFOA, its salts and PFOA-related compounds; PFHxS, its salts and PFHxS-related compounds; SCCPs; pentachlorobenzene; Dechlorane Plus; UV-328; MCCPs; Long-chain PFCAs

Total 37 listings

As of January 2026



Restriction

1 Pesticide: DDT

1 Industrial POP: PFOS, its salts and PFOSF

*Annex B chemicals have “Acceptable purposes” for which Parties can continue production/use if registered.

Unintentional releases

7 U-POPs:

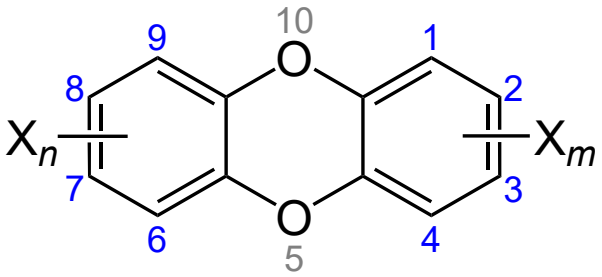
HCB, HCBD, pentachlorobenzene
PCBs, PCDDs, PCDFs,
polychlorinated naphthalenes

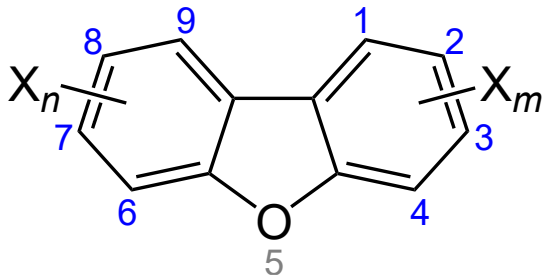
Under review

Article 8, Annex D, E, F,
POPs Review Committee (POPRC)

PBDD/Fs and PBCDD/Fs

Draft risk profile for polybrominated dibenzo-*p*-dioxins and dibenzofurans (PBDD/Fs) and mixed polybrominated/chlorinated dibenzo-*p*-dioxins and dibenzofurans (PBCDD/Fs)





- Proposed by Switzerland for listing in **Annex C** to the Convention (**unintentional production**).
- **POPs Review Committee** is preparing a draft risk profile, with particular attention to **information on the linkages between LRET and adverse effects on human health**, for consideration at POPRC-22 in September 2026.

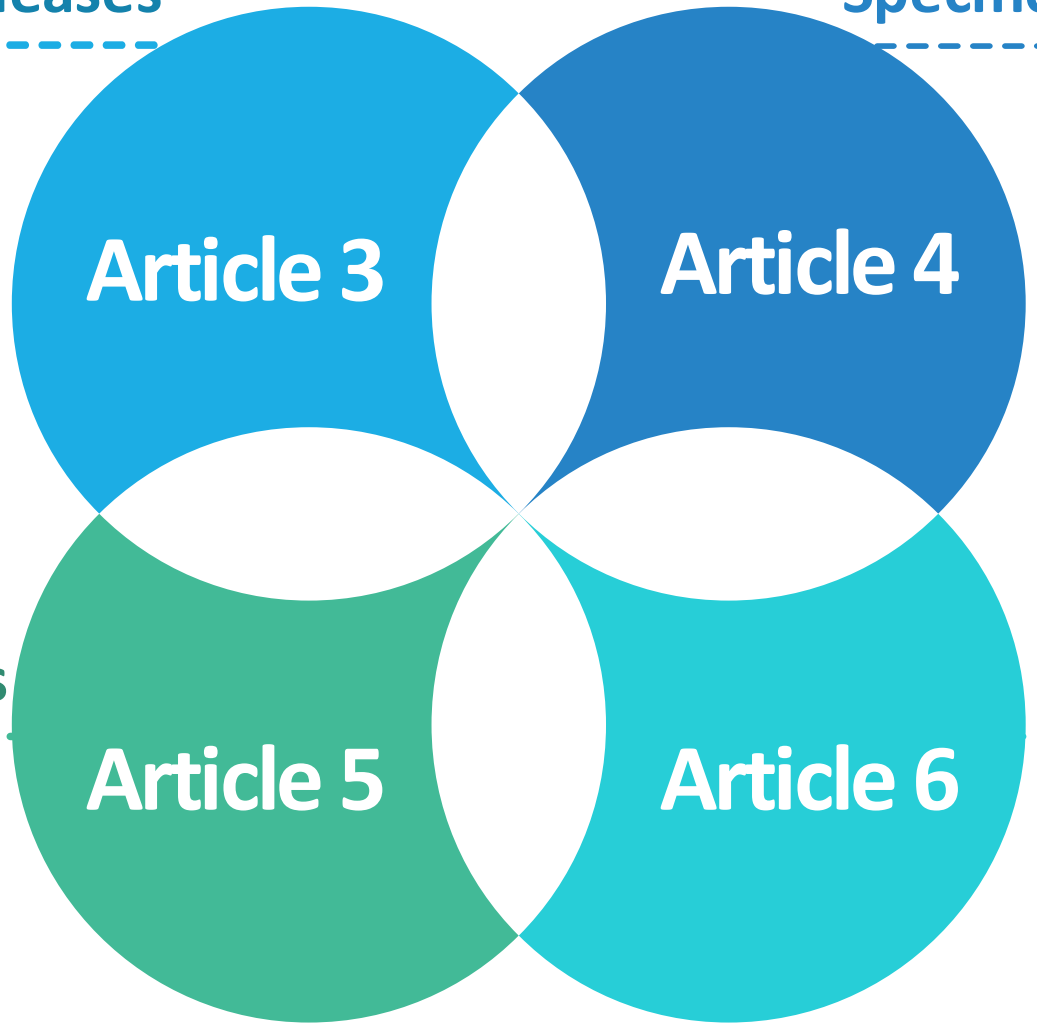
Stockholm Convention key provisions

Intentional releases

- Prohibit or restrict use and production
- Prohibit or restrict import and export, except for environmentally sound management (ESM) of POPs waste

Specific exemptions

- Parties may register for specific exemptions, which generally expire after five years unless otherwise specified.



Unintentional releases

- Develop and implement national action plans
- Promote BAT/BEP

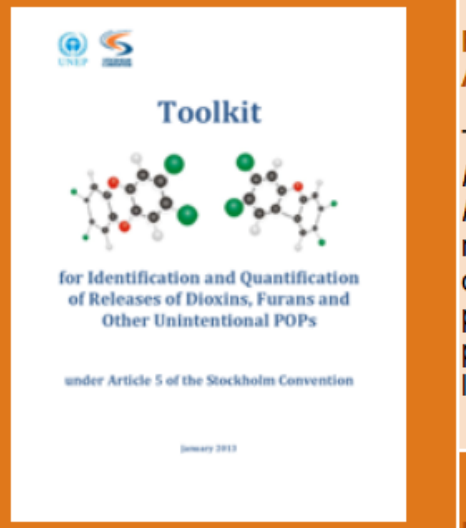
POPs stockpiles & waste

- Identify stockpiles and wastes containing POPs
- ESM of POPs waste
- Basel Convention

Stockholm Convention on persistent organic pollutants (POPs)

Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs

under Article 5 of the Stockholm Convention on Persistent Organic Pollutants



Access the Toolkit download page

Preface, Acknowledgements, Abbreviations and Acronyms

The *Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs* is intended to assist parties in establishing release inventories of unintentional POPs that are consistent in format and content, ensuring that it is possible to compare results, identify priorities, mark progress and follow changes over time at the country level, as well as regional and global levels.

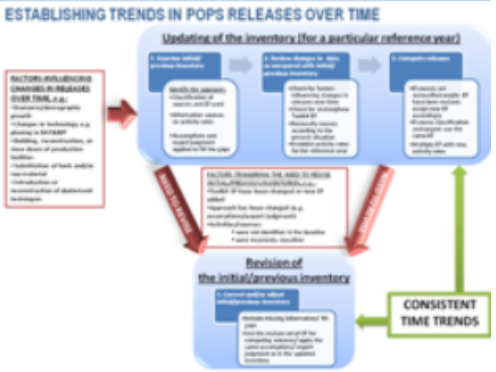
More

Part I General Guidance

The *Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs* is divided into three parts.

Part I includes general guidance for inventory development, update and revision, guidance on data quality and quality assurance and quality control of inventory results, guidance to determine activity rates, and others aspects.

More



Access the inventory update and revision explanation

Part II Default Emission Factors

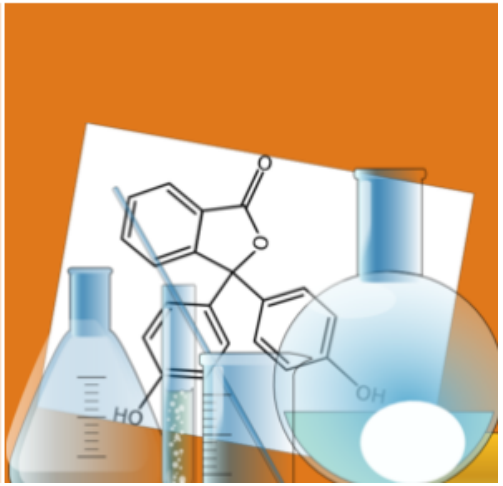
Part II of the *Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs* includes information on default emission factors for source categories grouped in ten source groups within the Toolkit, the levels of confidence assigned to each emission factor value, guidance on estimating activity rates, classifying sources and assigning the appropriate emission factors.

For the purpose of the PCDD/PCDF inventory

Part III Annexes and Example Inventories

Part III of the *Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs* includes annexes containing detailed technical complementary information on the derivation of dioxin emission factors for the ten source groups, along with emission factors for other unintentional POPs.

Part III also includes example inventories for each source group illustrating the process of inventory development, update and revision, and providing



Stockholm Convention

Article 16

Effectiveness evaluation

- **Periodic evaluation:**
  - ✓ Every 6 years (next evaluation: 2029)
- **Monitoring arrangements:**
  - ✓ Global Monitoring Plan (GMP) for POPs
- **Key basis for the Effectiveness Evaluation:**
  - ✓ Article 15 National reports <--- Article 7 NIP
  - ✓ Article 16 GMP reports
  - ✓ Article 17 Compliance information

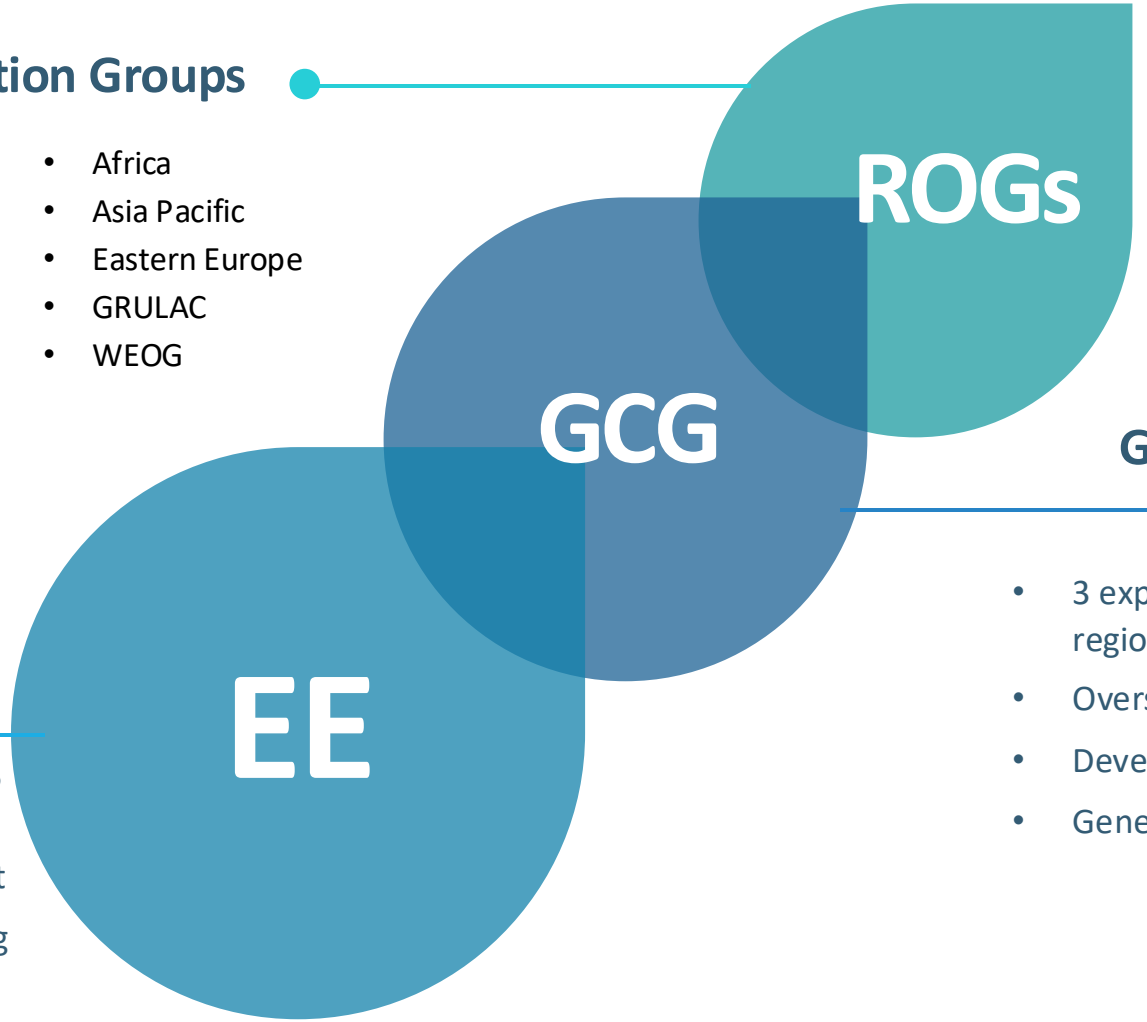
Article 16

Effectiveness evaluation and Global Monitoring Plan

Regional Organization Groups

- 6 experts per region, identified by each region through the Stockholm Convention COP Bureau (6x5=30)
- Coordinate regional monitoring activities
- Generate "**Regional Monitoring Reports**"

- Africa
- Asia Pacific
- Eastern Europe
- GRULAC
- WEOG



Global Coordination Group

- 3 experts per region, identified by each region from the ROGs (3x5=15)
- Oversee all the monitoring activities
- Develop/update GMP guidance
- Generate "**Global Monitoring Report**"

Effectiveness Evaluation committee

- 2 experts per region elected at the Stockholm COP (2x5=10), 1 expert from GMP GCG, 1 expert from Compliance, 2 experts identified by the Secretariat
- Generate "**Effectiveness Evaluation Report**", using information from: National reports, PCB report, DDT report, BAT/BEP experts' U-POPs release report, BDE report, PFOS report, **GMP report**, etc.

GMP and EE timeline

Every 6 years

Final GMP-4 report
Submit to COP-14; 3rd Effectiveness evaluation

2029

Draft Global monitoring report GMP-4
Submit to EE committee in Jan 2028

2028

Finalize 4th regional monitoring reports
Submit to COP-13
Begin preparation of 4th Global monitoring report (GMP-4)

2027

2026

4th regional monitoring reports in preparation

Draft GMP-3 report
Submitted to EE committee in Jan 2022

2023

2022

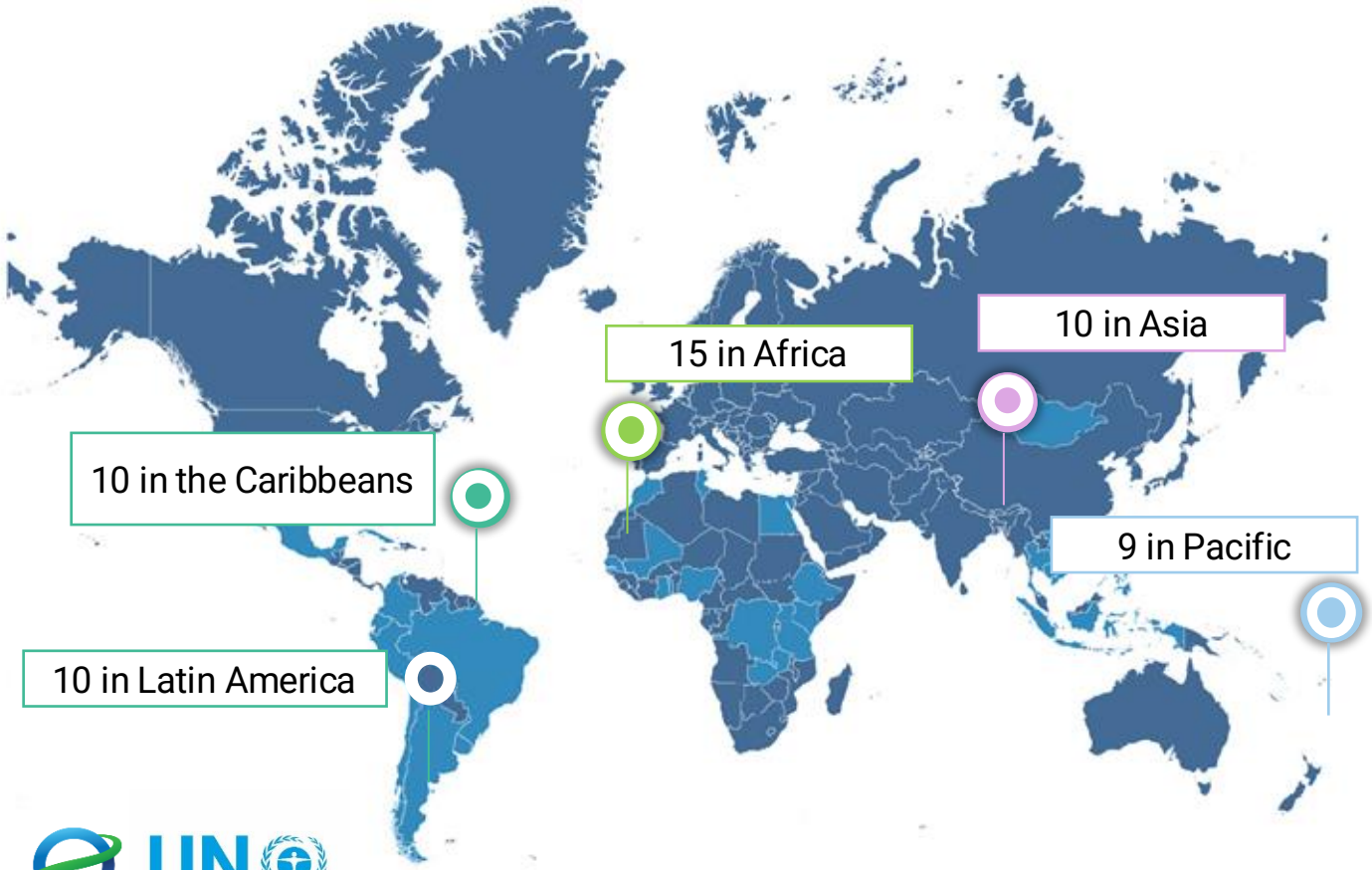
Finalized 3rd regional monitoring reports
Submitted to COP-10

2021

Final GMP-3 report
Submit to COP-11; 2nd full Effectiveness evaluation

Global Chemicals Monitoring Programme (GCMP)

2026–2030



Objective

POPs and mercury monitoring for effectiveness evaluation of the **Stockholm** Convention and to provide data to support the effectiveness evaluation mechanism of the **Minamata** Convention

Scope

5 regions (Africa, Asia, Pacific Islands, Caribbeans Islands, and Latin America)

Implementation arrangement

Global coordination project + five regional projects

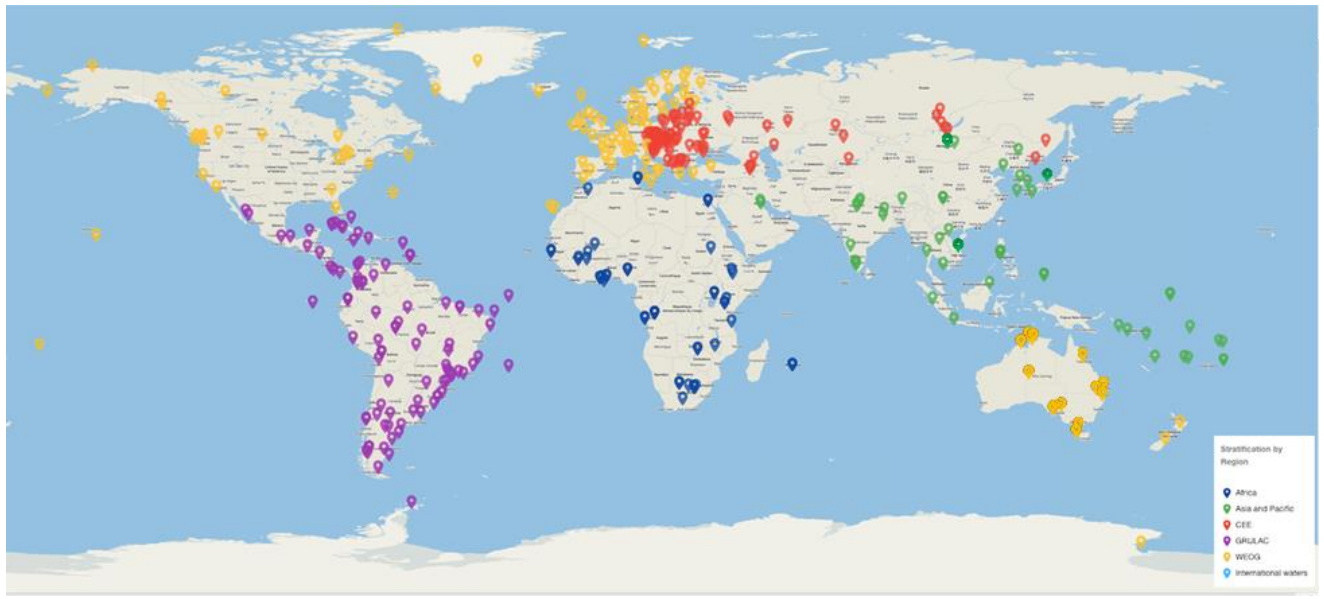
Duration

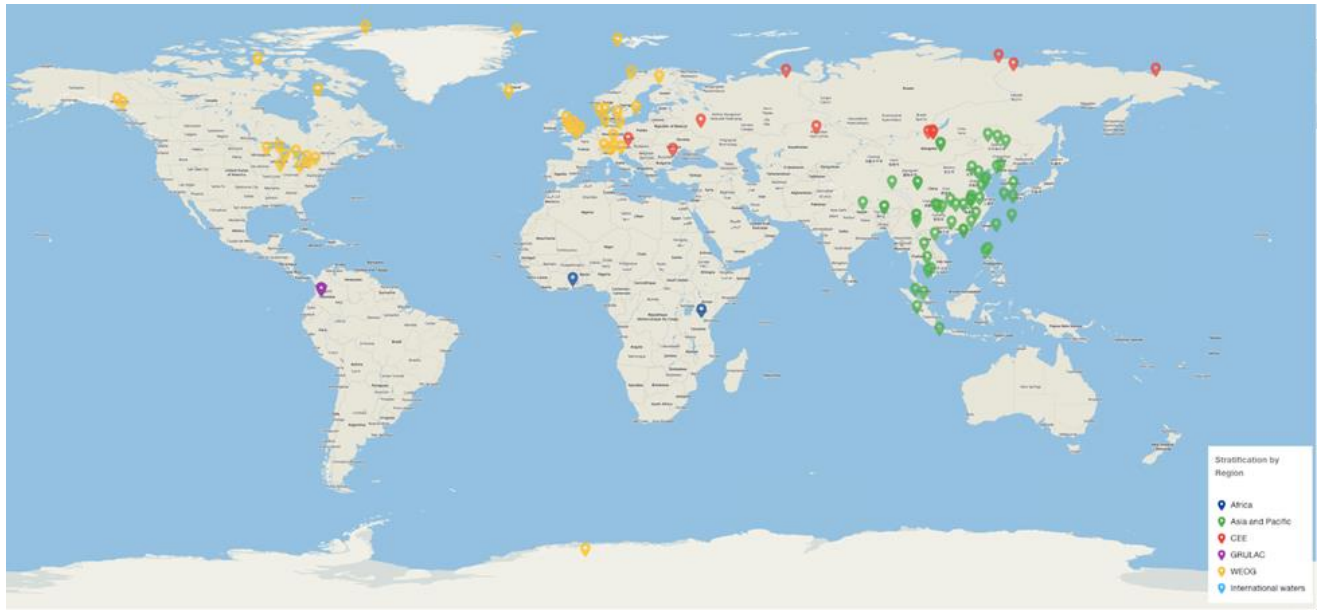
2026-2030

Budget

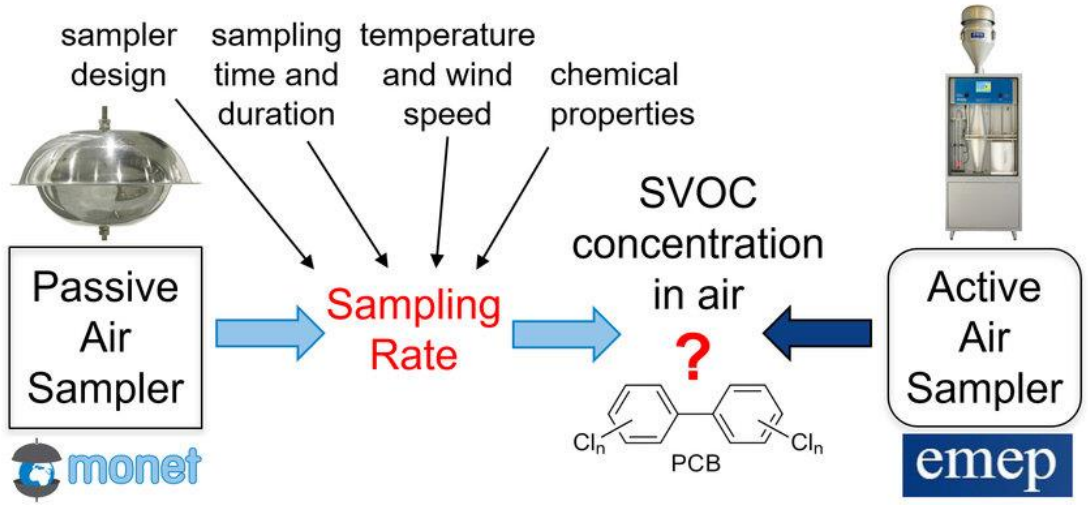
USD 23,500,000 (GEF Grant), Total anticipated co-finance- ~USD 65 mil

GMP air monitoring stations





Passive air sampling sites



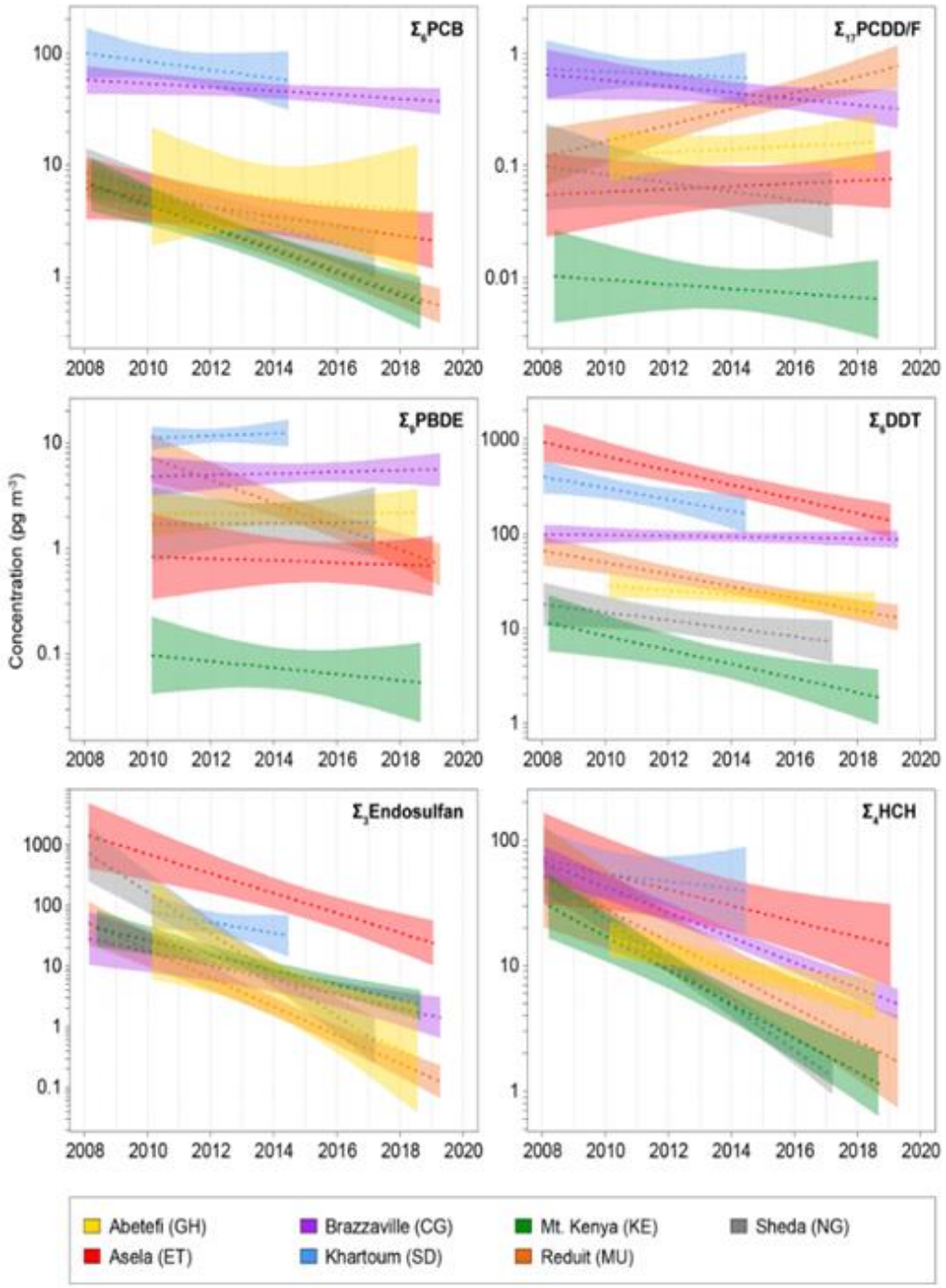
Kalina et al., 2022. Comparability of semivolatile organic compound concentrations from co-located active and passive air monitoring networks in Europe. Environmental Science: Processes and Impacts.

Active air sampling sites

Air

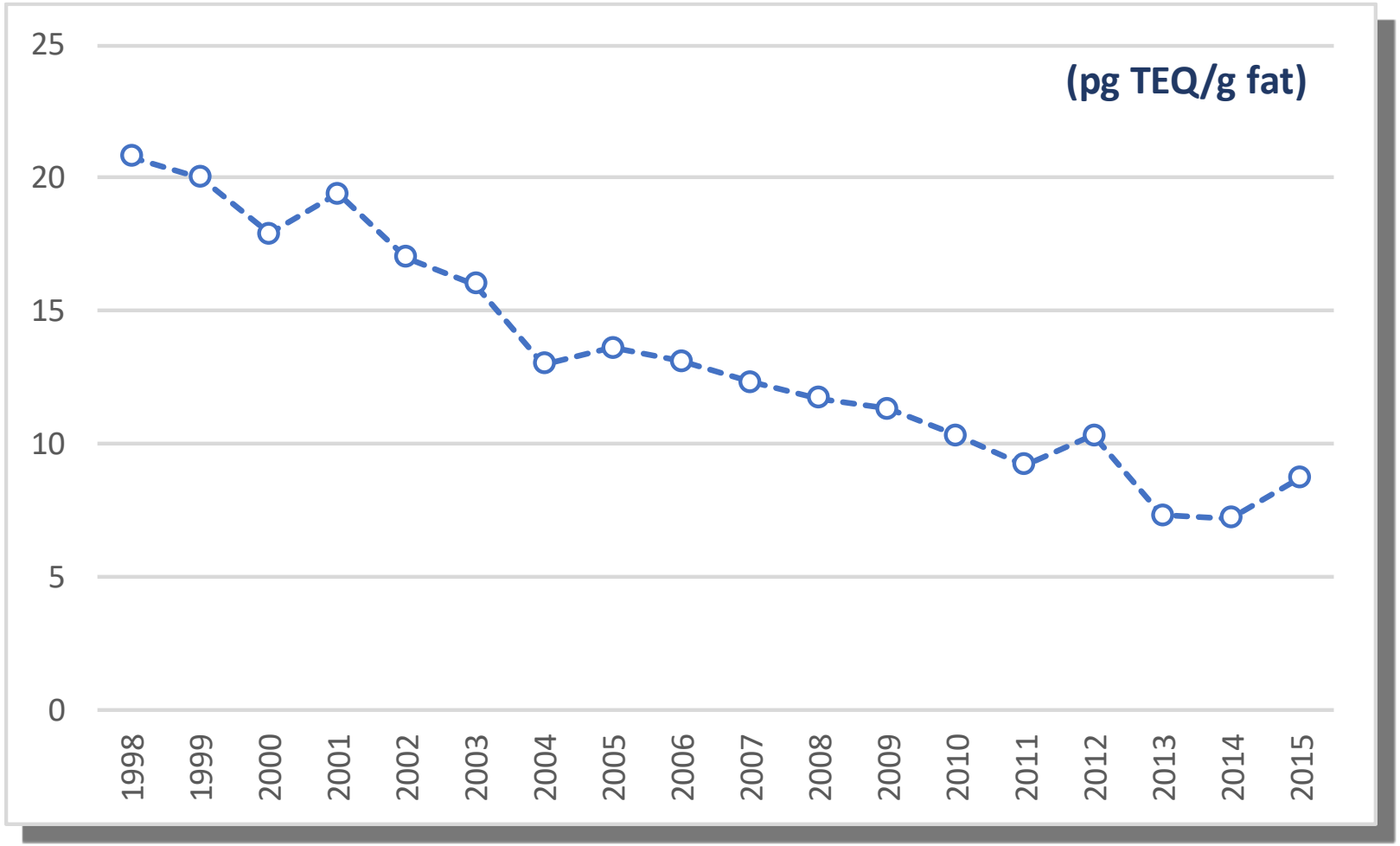
Temporal trends of air concentrations of POPs in the African region (2008–2020)

The figures indicate decreasing trend of air concentrations of PCB; dioxins and furans (PCDD/PCDF); polybrominated diphenyl ethers (PBDE); DDT; endosulfan; hexachlorocyclohexane (HCH).



STOCKHOLM

Human tissues

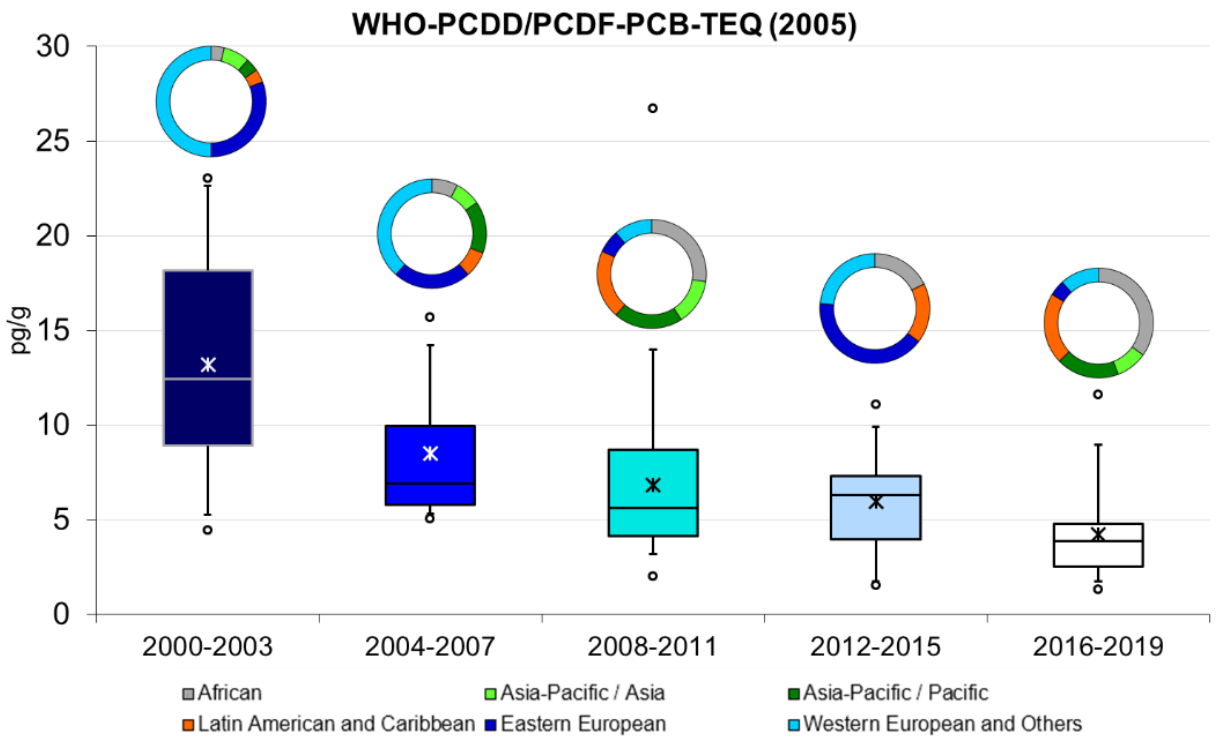


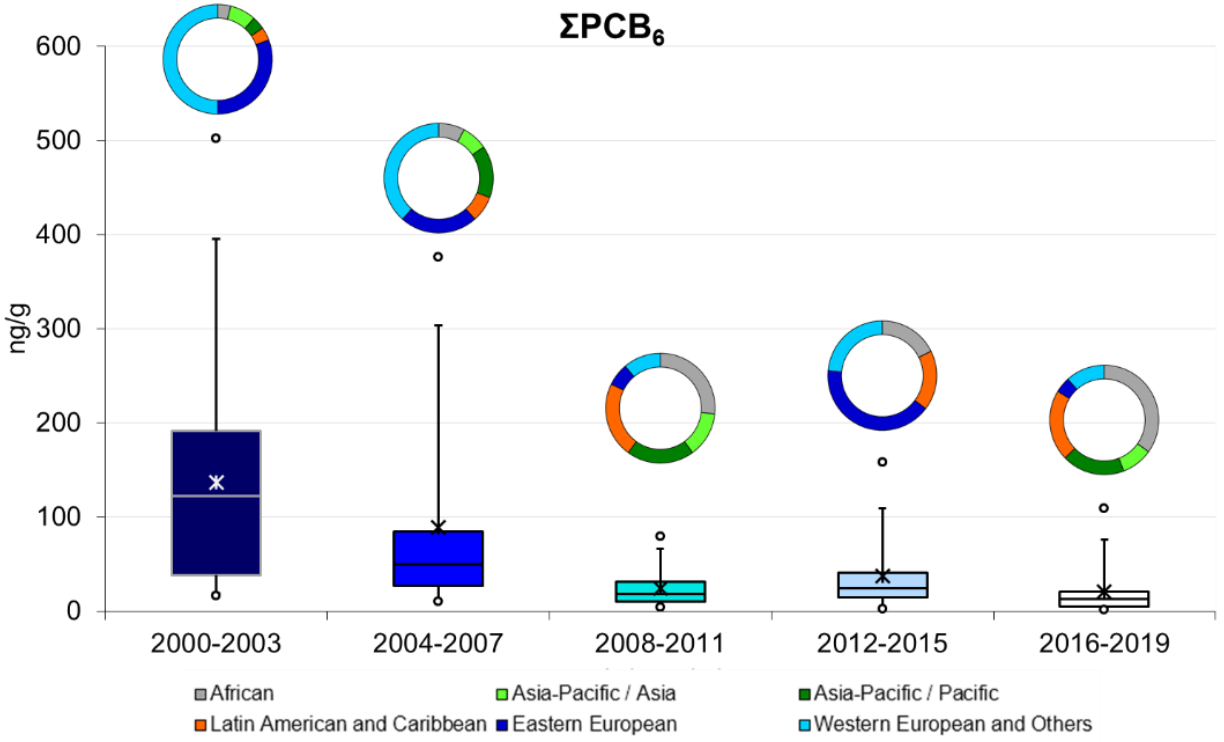
Temporal trend (1998–2015) of dioxin concentrations (pg TEQ/g fat) in human milk in Japan).

(Averages of each year's data are plotted. Dioxins: sum of PCDD (7 isomers), PCDF (10 isomers) and dl-PCB (12 isomers). Source: Third regional monitoring report for Asia-Pacific).

STOCKHOLM

Human tissues



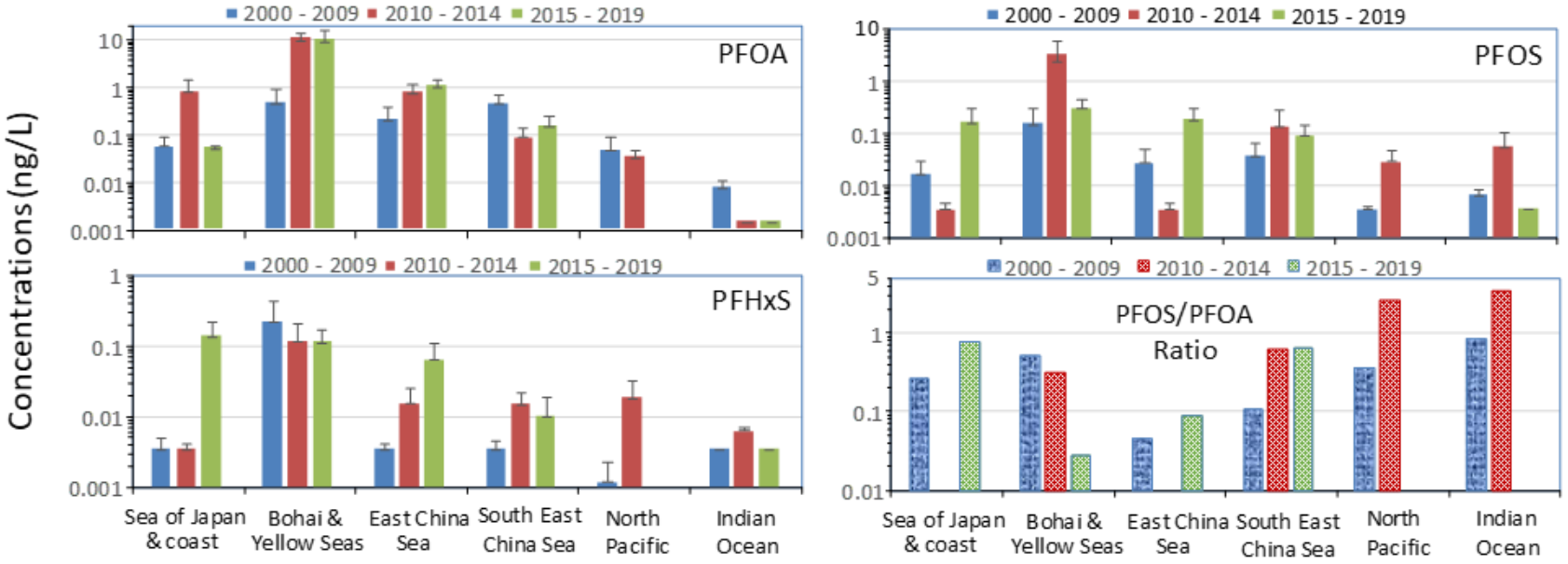


Median and range of WHO-PCDD/PCDF-TEQ concentrations (pg/g lipid) and indicator PCB (ΣPCB_6) concentrations (ng/g lipid) in human milk (2000–2019)

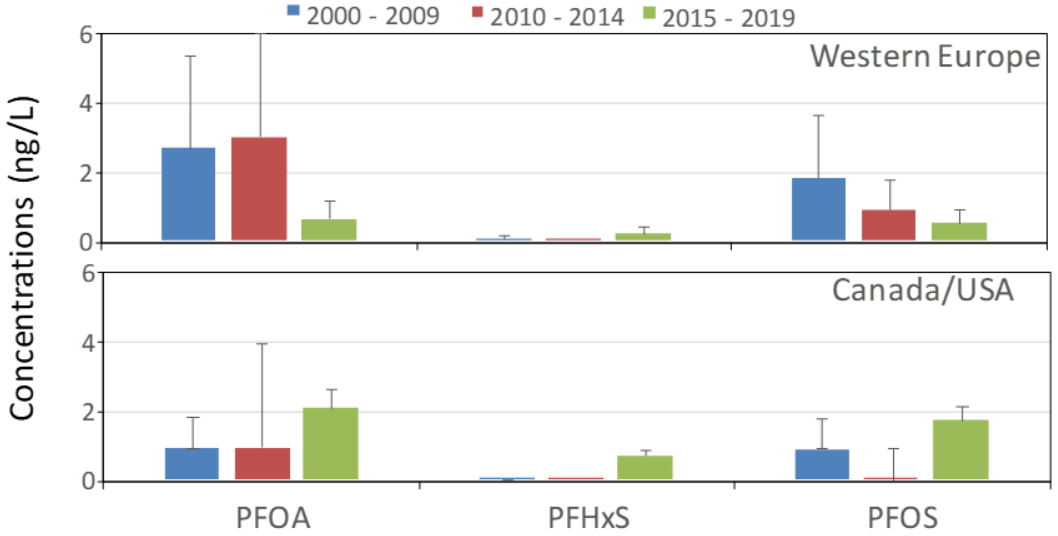
STOCKHOLM

Water

Coastal Seas and Ocean



Rivers/Lakes

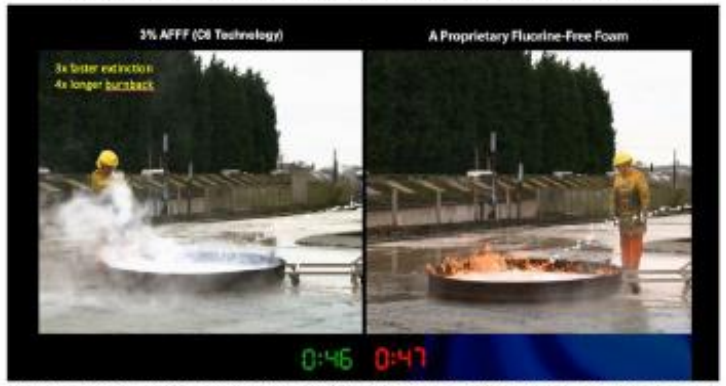


Temporal trends (2000–2009, 2010–2014, 2015–2019) of PFOA, PFOS, PFHxS median concentrations (ng/L) and PFOS/PFOA ratios in coastal seas and ocean waters

STOCKHOLM

Aqueous-film foaming foam (AFFF)

Comparison ICAO Level B Jet A1 Fire Test : 3% C6 AFFF v 3% F3 (without Fluorine)



Source: Angus Fire, 2013 – You Tube Comparative video tests "AFFF/AR-AFFF v Fluorine Free Foam (F3)", on ICAO Level B and EN1568-4 tests - evidence faster extinction, superior burnbacks and less agent usage with short-chain C6 fluorosurfactants, www.youtube.com/watch?v=1MG2YopNfdQ

Comparison EN1568 - 4 Polar Solvent Fire Test : 3% C6 AR-AFFF v 3% AR-F3 (without Fluorine)

Source: Angus Fire, 2013 – You Tube Comparative video tests "AFFF/AR-AFFF v Fluorine Free Foam (F3)", on ICAO Level B and EN1568-4 tests - evidence faster extinction, superior burnbacks and less agent usage with short-chain C6 fluorosurfactants, www.youtube.com/watch?v=1MG2YopNfdQ

Some New Zealand firefighting activity has led to surface contamination with perfluorinated chemicals

Evaluation of the continued need for PFOS

Evaluation every 4 years (2015, 2019, 2023, 2027…)

- Insect baits with **sulfluramid** as an active ingredient for control **of leaf-cutting ants** from *Atta spp.* and *Acromyrmex spp.* for agricultural use only

2020-
Acceptable purpose

2020-2025*
Specific exemptions
*for most Parties

- **Hard metal plating** in closed-loop systems
- **Fire-fighting foam** for liquid fuel vapour suppression and Class B fires in installed systems, including both mobile and fixed systems

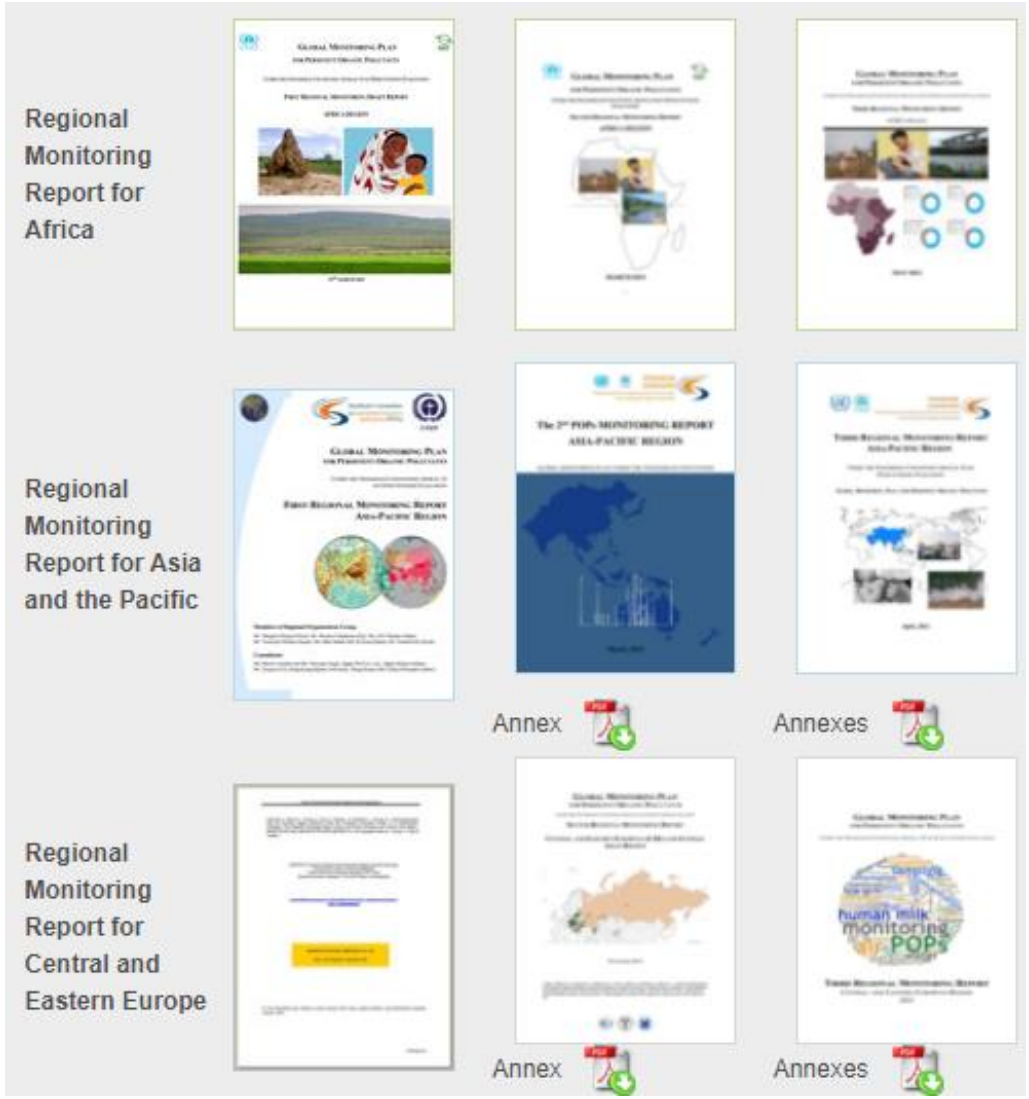
- Photo-imaging
- Photo-resist/anti-refletive coatings
- Etching agent
- Hard metal plating in closed-loop
- Aviation hydraulic fluids
- Certain medical devices
- Fire-fighting foam

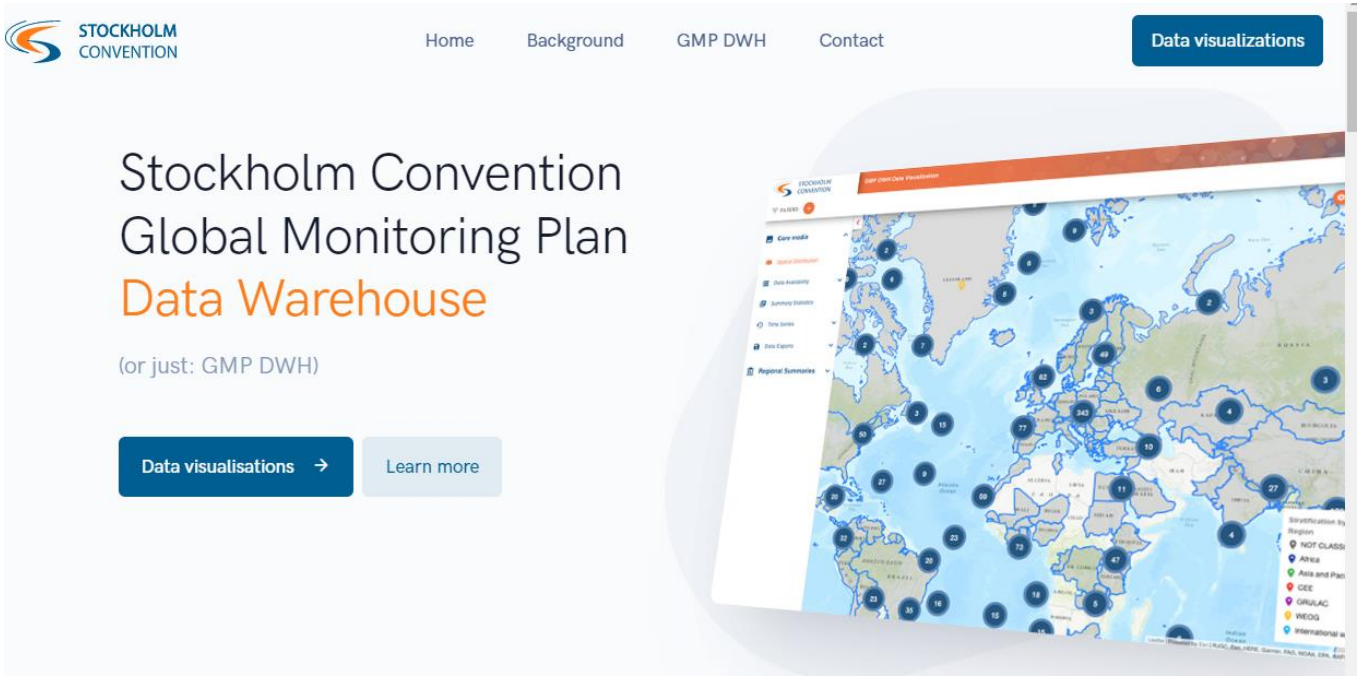
2009-2019
Removed acceptable purposes

2009-2019
Removed specific exemptions

- Photo masks in semiconductors
- Decorative metal plating
- Color printers
- Insecticides (red imported fire ants, termites)
- Chemically driven oil production
- Carpets, leather, textile, upholstery, paper, packaging, coatings, rubber, plastics

GMP-3 report (2023)





GMP Data Warehouse

Hosted by RECETOX

UNEP GEF POPs GMP Projects and GMP Dashboard

2008–2012, 2016–2023

UNEP/GEF POPs Global Monitoring Plan Projects 2008-2012, 2016-2023

POPs Monitoring

For more information on the projects and data, please c

ABOUT THE DASHBOARD

Persistent Organic Pollutants (POPs) are hazardous chemicals that **threaten human health and the planet's ecosystems**.

To support the Stockholm Convention POPs Global Monitoring Plan, UNEP/GEF POPs GMP projects conducted data generation and capacity building in 42 countries to record the presence of POPs in humans and in the environment.

The dashboard aims to make **data and information** easily accessible and understandable for broader stakeholders to support informed decision making.

Sampling Activities

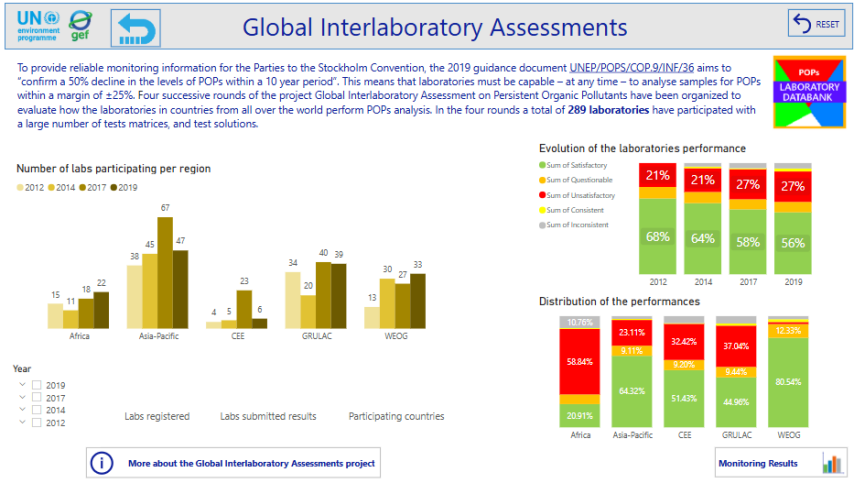
Capacity Building

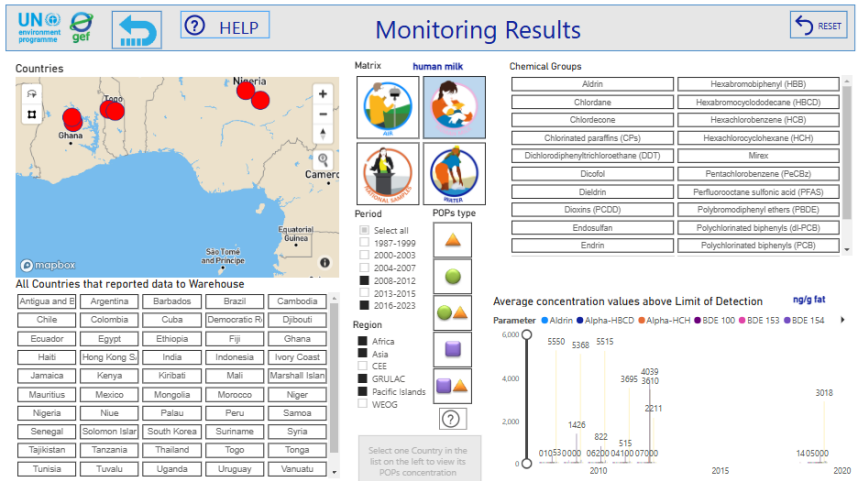
Monitoring Results

Inter-Lab Assessments

POPs Information

Data Download





Using GMP Data to Set Priorities and Assess Progress

- Integrated GMP data supports national priority setting, helping countries identify key POPs, trends, and exposure pathways relevant to their context.

- Time-trend GMP data allows countries to evaluate the effectiveness of control measures and assess progress under the National Implementation Plan.

Thank you!

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